

Attorney Docket No. 10139/06302 (00005-05PUS1)

IN THE CLAIMS:

Please amend the claims as follows:

1 - 33. (Canceled)

34. (Previously Presented) An intramedullary nail comprising:

a nail body having a longitudinal axis, a proximal end configured and dimensioned for coupling to an insertion device, and a distal end having a tip configured and dimensioned for insertion into the intramedullary canal of a long bone,

at least three transverse holes extending through the distal end of the nail body, each transverse hole defining a hole axis, and all three transverse holes grouped at the distal end within a distance  $x$  measured from the tip of the nail body to the axis of the transverse hole furthest from the tip,

wherein a projection of the three hole axes of the at least three transverse holes in a plane orthogonal to the longitudinal axis is such that at least two of the projected hole axes are at an angle  $\alpha$  with respect to one another, where  $0 < \alpha < 90^\circ$ , and where the distance  $x \leq 25d$ , where  $d$  is either the diameter of the largest of the at least three transverse holes or  $d$  is the mean diameter of the at least three holes.

35. (Currently Amended) The nail of claim [[1]] 34, where the distance  $x \leq 7d$ .

36. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $58^\circ \leq \alpha \leq 62^\circ$ .

37. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $59^\circ \leq \alpha \leq 61^\circ$ .

38. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $43^\circ \leq \alpha \leq 47^\circ$ .

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39. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $44^\circ \leq \alpha \leq 46^\circ$ .
40. (Currently Amended) The nail of claims [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $35^\circ \leq \alpha \leq 37^\circ$ .
41. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $35.5^\circ \leq \alpha \leq 36.5^\circ$ .
42. (Currently Amended) The nail of claim [[1]] 34, ~~The nail of claim 1~~, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $29^\circ \leq \alpha \leq 31^\circ$ .
43. (Currently Amended) The nail of claim [[1]] 34, wherein at least two of the projected hole axes are at an angle  $\alpha$  of  $29.5^\circ \leq \alpha \leq 30.5^\circ$ .
44. (Currently Amended) The nail of claim [[1]] 34, further comprising at least a fourth hole grouped at the distal end of the nail body within the distance  $x$  measured from the tip of the nail body to the axis of the transverse hole furthest from the tip.
45. (Previously Presented) An intramedullary nail comprising:

a nail body having a longitudinal axis, a proximal end configured and dimensioned for coupling to an insertion device, and a distal end having a tip configured and dimensioned for insertion into the intramedullary canal of a long bone,

at least three transverse holes extending through the distal end of the nail body, each transverse hole defining a hole axis, and all three transverse holes grouped at the distal end within a distance  $x$  measured from the tip of the nail body to the axis of the transverse hole furthest from the tip,

wherein a projection of the three hole axes of the at least three transverse holes in a plane orthogonal to the longitudinal axis is such that at least two of the projected hole

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axes are at an angle  $\alpha$  with respect to one another, where  $0 < \alpha < 90^\circ$ , and where the distance  $x < 2(n)(d)$ , where  $n$  is the number of transverse holes grouped within the distance  $x$  from the tip of the nail body and  $d$  is either the diameter of the largest of the at least three transverse holes or  $d$  is the mean diameter of the at least three holes.

46. (Previously Presented) The intramedullary nail of claim 45, wherein the distance  $x < 1.8(n)(d)$ .
47. (Previously Presented) The intramedullary nail of claim 45, wherein the distance  $x < 1.5(n)(d)$ .
48. (Previously Presented) The intramedullary nail of claim 45, wherein the distance  $x < 1.4(n)(d)$ .
49. (Previously Presented) The intramedullary nail of claim 45, wherein the distal end of the nail includes at least five transverse holes grouped within the distance  $x$ , such that  $n = 5$ .
50. (Currently Amended) The intramedullary nail of claim 45, wherein at least two of the transverse holes  $[[a]]$  at least partially intersect one another.
51. (Currently Amended) The intramedullary nail of claim  $[[51]]$  50, wherein the at least two intersecting transverse holes are spaced at an angle  $\alpha$  of  $88^\circ - 92^\circ$  with respect to one another.
52. (Previously Presented) The intramedullary nail of claim 45, wherein at least one of the transverse holes includes an internal thread.
53. (Previously Presented) The intramedullary nail of claim 45, wherein at least one of the transverse holes includes at least a portion with a conical shape.
54. (Previously Presented) The intramedullary nail of claim 45, wherein the nail body has a tubular cross-section.

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55. (Previously Presented) The intramedullary nail of claim 45, wherein the axes of all transverse holes are located in planes orthogonal to the longitudinal axis of the nail body.

56. (Currently Amended) An intramedullary nail comprising:

a nail body having a longitudinal axis, a proximal end configured and dimensioned for coupling to an insertion device, and a distal end having a tip configured and dimensioned for insertion into the intramedullary canal of a long bone,

at least three transverse holes extending through the distal end of the nail body, each transverse hole defining a hole axis, and all three transverse holes grouped at the distal end within a distance  $x$  measured from the tip of the nail body to the axis of the transverse hole furthest from the tip,

wherein a projection of the three hole axes of the at least three transverse holes in a plane orthogonal to the longitudinal axis is such that at least two of the projected hole axes are at an angle  $\alpha$  with respect to one another, where  $0 < \alpha < 90^\circ$ , and where the distance  $a$  between the tip and the transverse hole closest to the tip is  $a \leq 5d$

where  $d$  is the diameter of the transverse hole closest to the tip.

57. (Previously Presented) The intramedullary nail of claim 56, wherein the distance  $a \leq 1.5d$ .

58. (Previously Amended) The intramedullary nail of claim 56, wherein a plurality of  $n$  transverse holes are located in the nail body, and a center of each hole is located at a distance  $x$  from the tip of the nail body, where  $1.05(n)(d) \leq x \leq 3.0(n)(d)$ .

59. (Previously Presented) The intramedullary nail of claim 58, where  $x < (4(d) + (n-1)(2.2d))$ .

60. (Previously Presented) The intramedullary nail of claim 56, wherein a distance  $b$  between the axes of two adjacent transverse holes is  $b \leq 1.5d$ .